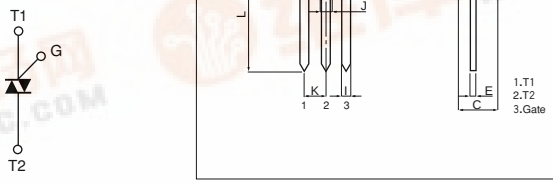
TRIAC（NON-ISOLATED TYPE）

TMG8C60

TMG8C60 are non-isolated triac suitable for wide range of applications like copier, microwave oven, solid state switch, motor control, light and heater control.

- $I_{T(RMS)}$ 8A
- High surge capability 88A
- Non-isolated type



DIM	Millimeters		
	Min	Typ	Max
A	5.58	6.40	7.49
B	8.38	8.60	8.90
C	4.40	4.50	4.70
D	1.15	1.27	1.39
E	0.35	0.45	0.60
F	9.66	10.10	10.28
G	—	16.25	—
H	—	3.83	—
I	0.75	0.85	0.95
J	1.14	1.27	1.40
K	—	2.54	—
L	12.70	13.50	14.27
M	14.48	15.00	15.87

Unit：mm

■Maximum Ratings

(Tj=25℃ unless otherwise specified)

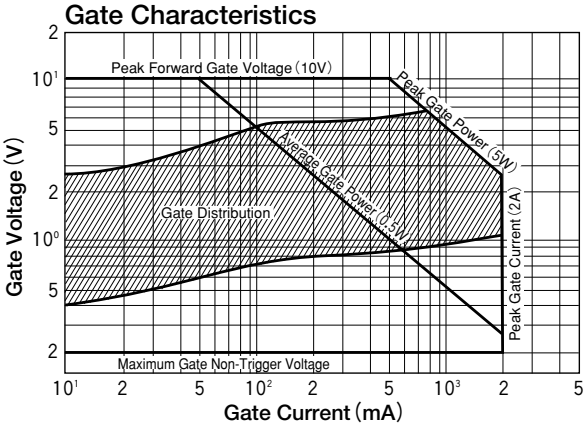
Symbol	Item	Ratings	Unit
		TMG8C60	
V_{DRM}	Repetitive Peak Off-State Voltage	600	V

Symbol	Item	Conditions	Ratings	Unit
$I_{T(RMS)}$	R.M.S. On-State Current	Tc=105℃	8	A
I_{TSM}	Surge On-State Current	One cycle, 50Hz/60Hz, peak, non-repetitive	80/88	A
I^2t	I^2t	1ms～10ms	32	A^2S
P_{GM}	Peak Gate Power Dissipation		5	W
$P_{G(AV)}$	Average Gate Power Dissipation		0.5	W
I_{GM}	Peak Gate Current		2	A
V_{GM}	Peak Gate Voltage		10	V
Tj	Operating Junction Temperature		−40 to +125	℃
Tstg	Storage Temperature		−40 to +125	℃
	Mass		2	g

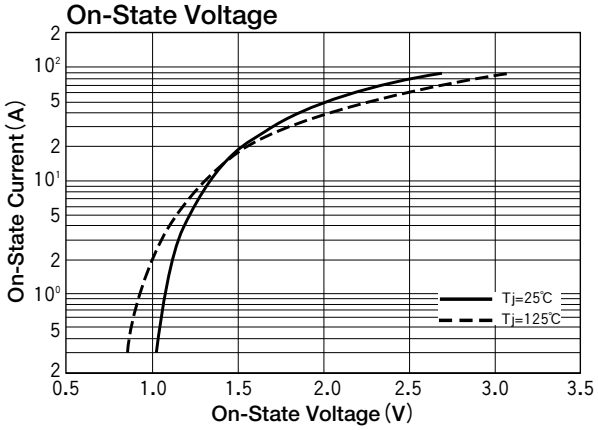
■Electrical Characteristics

Symbol		Item	Conditions	Ratings			Unit
				Min.	Typ.	Max.	
I_{DRM}		Reptitive Peak Off-State Current	$V_D=V_{DRM}$, Single phase, half wave, Tj=125℃			2	mA
V_{TM}		Peak On-State Voltage	I_T=12A, Inst. measurement			1.4	V
I_{GT1}^{+}	1	Gate Trigger Current	V_D=6V, R_L=10Ω			30	mA
I_{GT1}^{-}	2					30	
I_{GT3}^{+}	3					—	
I_{GT3}^{-}	4					30	
V_{GT1}^{+}	1	Gate Trigger Voltage	V_D=6V, R_L=10Ω			1.5	V
V_{GT1}^{-}	2					1.5	
V_{GT3}^{+}	3					—	
V_{GT3}^{-}	4					1.5	
V_{GD}		Non-Trigger Gate Voltage	Tj=125℃, $V_D=\frac{1}{2}V_{DRM}$	0.2			V
(dv/dt)c		Critical Rate of Rise off-State Voltage at commutation	Tj=125℃, (di/dt)c=−4A/ms, $V_D=\frac{2}{3}V_{DRM}$	10			V/μs
I_H		Holding Current			15		mA
Rth (j-c)		Thermal Impedance	Junction to case			2.0	℃/W

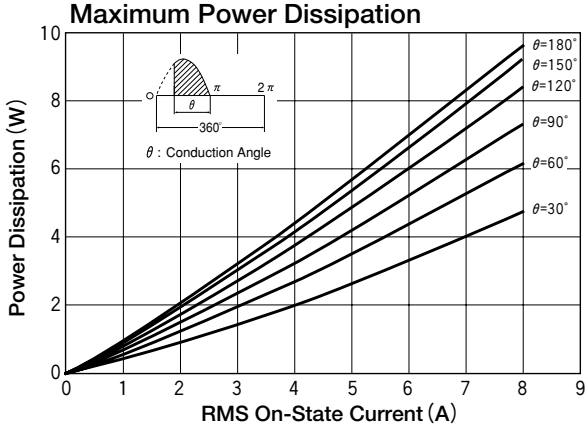
Gate Characteristics



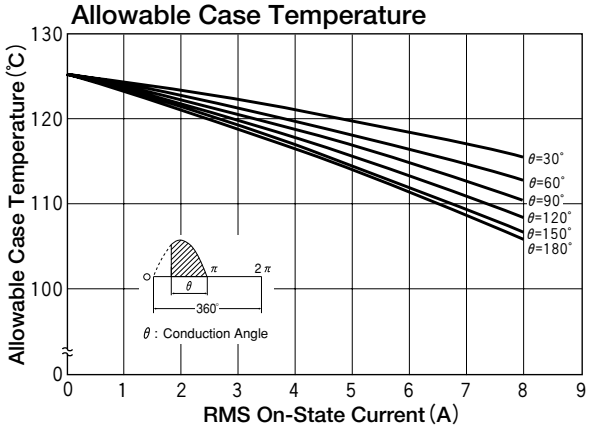
On-State Voltage



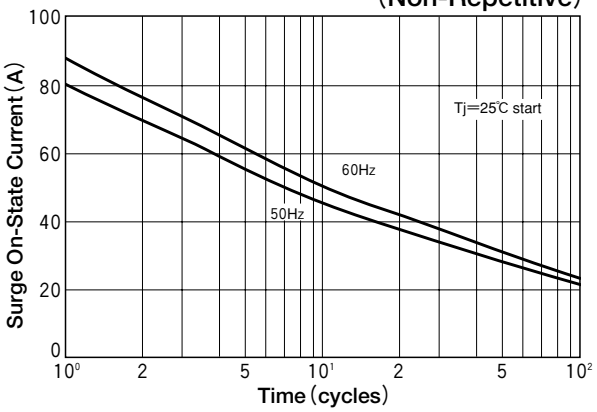
On State Current vs. Maximum Power Dissipation



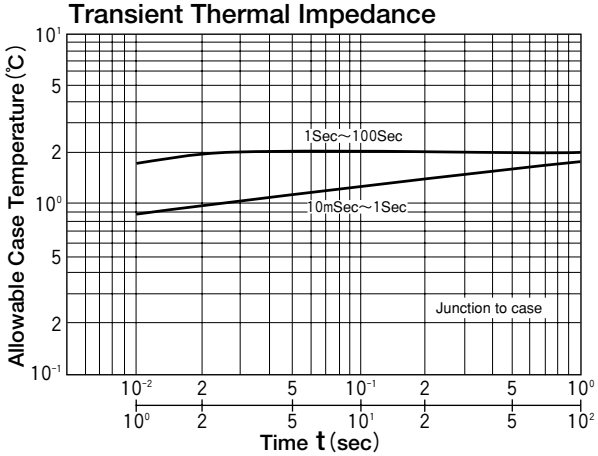
On State Current vs. Allowable Case Temperature



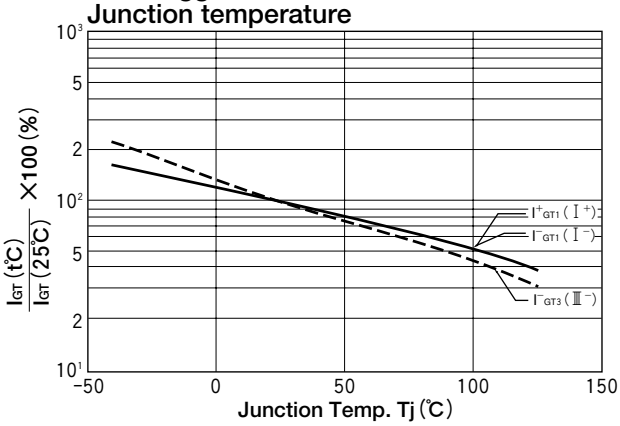
Surge On-State Current Rating (Non-Repetitive)



Transient Thermal Impedance



Gate trigger current vs. Junction temperature



Gate trigger voltage vs.Junction temperature